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ABSTRACT

To evaluate potential sources of female sex bias and sex stereotyping within traditionally male occupational programs at the College of DuPage, programs with low female enrollment were selected for study: air conditioning and refrigeration, architectural drafting, auto service, building construction, criminal justice, electronics, fire science, graphic arts, manufacturing technology, plastics, and supermarket management. A three-part research design surveyed (1) men and women randomly selected from all winter 1978 registrants, (2) women enrolled in the specified occupational programs, and (3) occupational coordinators. Findings indicated that parents, friends, and childhood experiences ranked highest as sources of women's initial interest in the non-traditional occupational programs. Most of these women planned further study in their field either at the college or a four-year institution. All groups indicated that they did not believe their sex precluded their entry into college programs. Potential sources of sex bias at the college were consistently rated lower than potential sources of sex bias outside the college. Published materials such as textbooks, occupational literature and information about programs were rated as having the greatest potential for sex bias. Half of the occupational coordinators reported that there were places in their programs for women, but the other half felt opportunities were limited based on physical ability. (Author/MB)

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SEX BIAS IN TRADITIONALLY MALE OCCUPATIONAL PROGRAMS

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Sex Bias In Traditionally
Male Occupational Programs

Summary

This study was done to evaluate potential sources of female sex bias and sex stereotyping within traditionally male occupational programs at College of DuPage. A three part research design was developed. This design included: 1) a survey of men and women selected randomly from the group of all Winter Quarter 1978 registrants, 2) a survey of women enrolled in occupational programs traditionally viewed as male programs, and 3) interviews with occupational coordinators.

Findings

1. Parents, friends, and childhood experiences ranked highest as sources of initial interest in non-traditional occupational programs.
2. Most women in non-traditional programs plan to continue their studies, either at C/D or a four-year college or university.
3. Sex did not influence the occupational choice of women in the non-traditional programs.
4. All groups indicated that they did not believe their sex precluded their entry into C/D programs.
5. Potential sources of sex bias at C/D were consistently rated lower than potential sources of sex bias outside of C/D.
6. Published materials such as textbooks, occupational literature and information about programs were rated as having the greatest potential for sex bias.
7. Occupational coordinators report that there are places in their occupational programs for women. In addition, they believe that women can perform satisfactorily in training.
8. Coordinators identified published materials as being a source of potential sex bias.

SEX BIAS IN TRADITIONALLY MALE OCCUPATIONAL PROGRAMS

This study was done to evaluate potential sources of female sex bias and sex stereotyping within traditionally male occupational programs at College of DuPage. Enrollment statistics for fall, 1977, were studied to identify those programs in which there would most likely be occurrences of sex bias. Programs selected for study were those where there was a disproportionately low enrollment of females. These non-traditional programs are: Air Conditioning and Refrigeration, Architectural Drafting, Auto Service, Building Construction, Criminal Justice, Electronics, Fire Science, Graphic Arts, Manufacturing Tech. (Drafting, Materials, Evaluation), Plastics, and Supermarket Management. The research attempts to identify sources of female sex bias operating to deter entry into these programs, as will as those biases which tend to discourage females from continuing study and gaining employment.

To assess the relative importance of various sources of occupational stereotyping and sex bias, a three part research design was developed. This design required: 1) a survey of men and women selected randomly from the group of all Winter Quarter 1978 registrants (Appendix B); 2) a survey of women enrolled in occupational programs traditionally viewed as male programs (Appendix C); and 3) interviews with occupational coordinators (Appendix D). The first group was included to serve as a "benchmark" for the responses of those women in traditionally male occupational programs. Thus, consideration can be given to the questions: "Do women in traditionally male occupational programs differ from students in general (both male and female)?" and "Do women in traditionally male occupational programs differ from women in more traditional areas?"

Representativeness of the Student Samples

Before any evaluation of responses can be made, a determination of the adequacy and representativeness of the respondents must be made. To accomplish this, consideration needs to be given to the response rates, sample sizes, and comparisons of selected demographic characteristics of the samples with known characteristics of all College of DuPage students.

For the registration survey, 284 persons were asked to complete questionnaires. Of these, 236 or 83.1% did complete and return their survey. This response rate is slightly lower than those of other registration surveys, but the response rate should prove adequate for further analysis.

A questionnaire surveying women in "non-traditional" majors was mailed to 109 women. After two mailings one survey was returned as "non-deliverable" and 73 were completed and returned. Therefore, the response rate for this survey was 68.6%. For a mailed questionnaire, this is among the highest rates experienced by the Office of Institutional Research. As with the previous survey, the response rate and the number of responses suggest that further analysis is warranted.

The next question is: "To what extent do the samples reflect known characteristics of C/D students?" Known characteristics were obtained from the Data Processing 45 series 10th Day report for Winter Quarter 1978. The comparisons appear on the following page.

TABLE 1

Comparison of Survey Samples and
Known Demographic Characteristics

	Survey				Known Characteristics[a]		
	Non-traditional	Registration					
	Women	Women	Men	Total	Women	Men	Total
Age (average)	24.0	26.4	23.3	24.9			25.0
Enrolled (percents)							
Part-time	63	56	61	59	72	62	67
Full-time	37	43	39	41	28	38	33
Credit Hours (average)	9.23	10.00	9.90	9.95	7.82	9.11	8.45
Sex (percent)		50	50		51	49	

a: Data Processing 45 Series 10th Day Report 1/16/78

Age: C/D students are known to average 25.0 years of age. Breakdowns of age by sex are not available. The average age of respondents to the registration survey was 24.9 years. The difference of 0.1 years is not statistically significant ($t = 0.16$ $df = \infty$ $p \leq .05$). The average age of women enrolled in non-traditional majors was 24.0 years. This is significantly younger than both the average student ($t = 2.98$ $df \infty$ $p \leq .05$) and the female respondents to the registration survey ($t = 1.72$ $df = 187$ $p \leq .05$). This indicates that women in non-traditional majors tend to be younger than women in other majors.

Enrollment: The percentage of women enrolled part-time/full-time was not well represented in the registration survey. Considering all female students, 72 percent are enrolled part-time. Of those women responding to the registration survey, only 56 percent were enrolled part-time. This difference of 16 percent is statistically significant ($z = 3.838$ $p \leq .0001$). This difference was not a result of different definitions defining "part-time" or "full-time."

This is revealed by the "credit hour" item. The average C/D female is enrolled for 7.82 quarter hours, whereas the average female who completed the registration survey was significantly higher at 10.00 quarter hours ($t = 3.87$ $df = 112$ $p < .05$). Therefore, a bias has been introduced into the results of the registration survey due to an over representation of full-time students in the sample. This should preclude any generalization of the registration survey results to the total student body. But, it should be noted that the difference in course load for women enrolled in "non-traditional" majors is statistically similar to female respondents to the registration questionnaire ($t = .95$ $df = 188$ $p < .05$).

Sex: The single underlying concern of this study is the influence of an individuals sex on their entry into various occupational fields. The ratio of men to women should then be the most important consideration when assessing the representativeness of the registration survey's sample. Of all C/D students, 51 percent are female and 49 percent are male. This compares favorably with the 50/50 distribution found in the respondents to the registration survey. In fact, this difference of 1 percent is not statistically significant ($z = .037$ $p < .36$).

Conclusions: The age and sex distributions of the registration survey adequately reflect the known characteristics of all C/D students. The registration survey's distribution of credit load does not reflect known characteristics of all students; but does reflect the characteristics of those women majoring in "non-traditional" programs. To the extent that the registration sample fails to reflect the credit load of all students, some bias maybe introduced into the results. But the fact that the sex variable is accurate and this survey is concerned with sex bias leads to the ultimate conclusion that the registration survey does reflect the sex stereotyping experiences of all C/D students.

Findings From Student Survey

Grades: Women enrolled in "non-traditional" programs are achieving relatively high grades. For all courses, a grade point average of 3.089 was attained. For courses in technical courses in their field, the typical grade point average is even higher at 3.288.

Source of Interest in "Non-Traditional" Program: To assess how these women initially became interested in their occupational areas, several potential sources of interest were listed and the respondent was asked to check all that applied to her. Table 2 summarizes this item.

TABLE 2

Sources of Initial Interest in Non-Traditional Occupational Programs

Rank	Source	%[a]
1	Friends or Relatives	36
2	Childhood experiences	26
3	Parent(s)	25
(tie)	College Courses	25
5	Occupational Literature	23
6	Part-time Job Experience	19
7	Reading (not occupational literature)	18
8	Interest Tests	10
(tie)	Movies	10
10	C/D Advisor	6
11	High School Counselor	3
12	C/D Counselor	1
	Other	33

a - percent of women indicating this item as an interest stimulus.

Sources, other than schools, appear to be of greatest importance in stimulating interest in occupational areas. If "Friends or Relatives" (36%) were to be combined with "Parent(s)" (25%), the influence of the family becomes even more pronounced (61%). College courses and occupational literature rank behind primary group influences and high school counselors, C/D counselors and C/D advisors had very little influence on persons career choice.

Educational Plans: The women in non-traditional programs were asked to indicate their educational plans. Several options were listed and they were asked to check all that applied. Table 3 summarizes the results of this item.

TABLE 3

Educational Plans For
Women Enrolled in Non-Traditional Majors

Rank	Item	%[a]
1	Continue Study in Occupational Field	49
2	Transfer to 4 yr. college or university	36
3	Enter employment after leaving College of DuPage	34
4	Earn an AAS in a C/D occupational program	30
5	Earn an AA, AS or AGS degree	22
6	Earn a certificate in a C/D occupational program	16
7	Not interested in a degree or a certificate from C/D	5

a - percent of all students checking this item as being a potential educational plan. N = 73.

The responses to this item are interesting. Almost half (49%) expect to continue studies in their chosen occupational area and roughly a third plan to either transfer and/or enter employment after leaving C/D. By crosstabulating the different items a determination can be made regarding, for example, where students that plan to continue their studies will continue. To evaluate these combinations, 42 tables were created. These tables were of the form:

FIGURE 1

Item B	Item A	
	Yes	No
Yes	%	%
No	%	%

The "yes-Yes" cells indicate the percent of persons that checked Item A "yes" and also checked Item B "yes." The "Yes-Yes" cells from these 42 tables are summarized in Table 4.

TABLE 4

Summary of "Yes - Yes" Cells
For Student Educational Plans
(In Percents)

	Continue (N=36)	AAS (N=22)	Cert. (N=12)	AA, AS, AGS (N=16)	No Degree (N=4)	Transfer (N=26)	Work (N=25)
Continue	--	59	58	44	25	62	48
AAS	36	--	8	12	0	35	44
Cert.	19	4	--	12	0	12	20
AA, AS, AGS	19	9	17	--	0	27	8
No Degree	3	0	0	0	--	4	0
Transfer	44	41	25	44	25	--	16
Work	33	50	42	12	0	15	--

From this table the following insights can be drawn:

1. Of those students who plan to continue most will transfer to a 4 year college or university.

2. Of those students who plan to complete the requirements for any associates degree most plan to transfer to a 4 year college or university.

3. Of those students planning to receive a certificate, few will transfer and most will enter employment.

4. Few students (4) marked that they did not plan to complete a program. Therefore, no general statement can be made regarding this group.

It should be noted that the percentages for intent to transfer (Table 4 underlined) closely approximate the percentages reported in figure 2 of "College of DuPage Students Winter Quarter 1978 Registration Survey" (C/D - IR - A - 55, 781). This indicates that women in non-traditional occupational programs have educational goals similar to other C/D students.

Influence of Sex on Occupational Choice: The next question asked to what extent the respondents sex influences his/her occupational choice. Each level of influence was assigned a different numeric value: 1 = very little or no, influence; 2 = A moderate amount of influence; 3 = A very large influence. From these values, response intervals were established:

1.00 to 1.66 = Very little or no influence.

1.62 to 2.33 = A moderate amount of influence.

2.33 to 3.00 = A very large influence.

The results of this item are summarized in Table 5.

TABLE 5

Summary of Sex Influence on Occupational Choice

	Survey	Registration		
	Non-Traditional Women	Women	Men	Total
Mean	1.274	1.566	1.387	1.478
Standard Deviation	.479	.730	.635	.689
Number	73	113	111	224

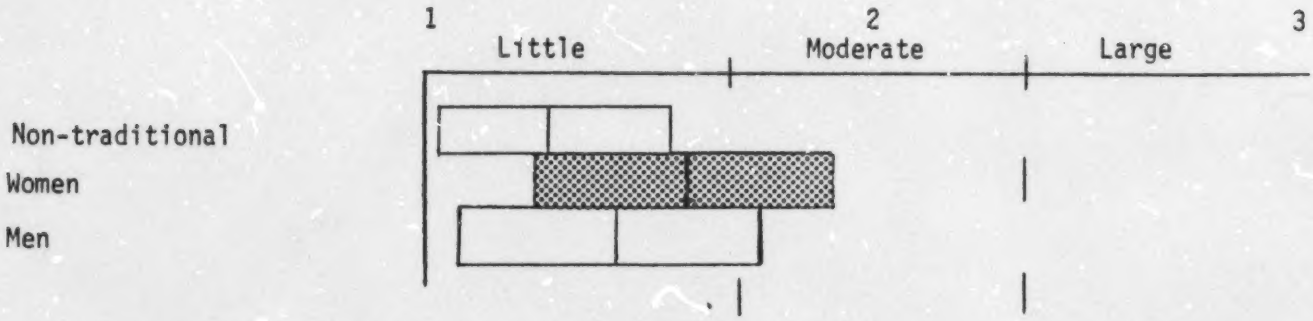
Comparison of:

Women in general to 1.66 cut off	t=1.45	df=112	$p \leq .05$	N.S.D.
Men to 1.66 cut off	t=4.61	df=110	$p \leq .05$	sig.
Non-traditional women to 1.66 cut off	t=6.99	df= 72	$p \leq .05$	sig.
Non-traditional women to general women	t=3.08	df=185	$p \leq .05$	N.S.D.
Non-traditional women to men	t=1.35	df=183	$p \leq .05$	N.S.D.

The average scores for all groups fall within the range of "very little or no (sex) influence" on occupational choice. However, the female respondents to the registration survey are "statistically" on the border line between "very little" and "moderate" sex influence on their occupational choice. Of special interest to this study is the difference in opinion between women majoring in non-traditional programs and women in general. First,it is noted that women in non-traditional programs ranked lowest on this sex influence item, significantly lower than women in general; and secondly, they are similar to men. These responses are presented graphically in figure 2.

Figure 2

Sex Influence on Occupational Choice



Belief that Programs are Intended for a Particular Sex Exist: The next item asked if the respondents: "Held the belief that some education or training preparations at C/D were not appropriate because of their sex." All groups indicated that they did not believe their sex precluded their entry into C/D programs. Men more so than women tended to feel that some programs were directed toward a particular sex. But these differences were not significant. (Table 6)

Table 6

Belief that Some Programs at C/D
Are More Appropriate Because of Sex
(In percents)

	Non-traditional	Registration	
	Women (N=73)	Women (N=116)	Men (N=114)
Yes	15	16	19
No	85	84	81

Comparisons of:

non-traditional women to women in general $z = .233$ $p \leq .41$
non-traditional women to men $z = .871$ $p \leq .19$
women in general to men $z = .806$ $p < .21$

Sources of Sex Bias: The next sections of the survey asked students to rate potential sources of sex bias at C/D and potential sources outside of C/D. A scale ranging from 1 = source of little or no bias to 3 = source of much bias, was used. From these values, response intervals were established:

1.00 to 1.66 = Source of little or no bias
1.66 to 2.33 = Source of some bias
2.33 to 3.05 = Source of much bias

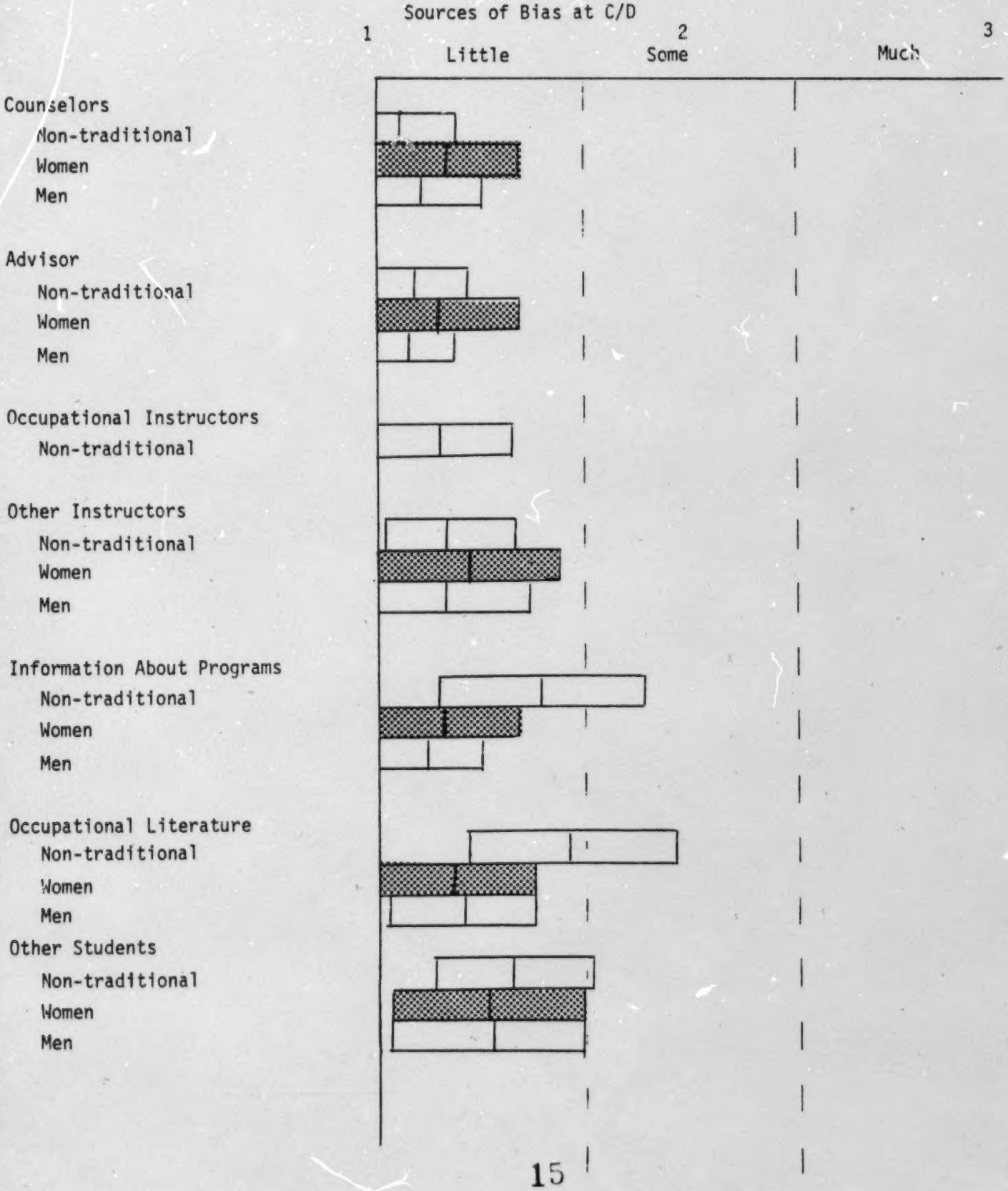
For each item the difference between the mean scores for women in non-traditional majors and the 1.66 cut off point between "source of little bias" and "source of some bias" was tested for significance. This test establishes whether or not a score is "border line." Secondly, the difference between the mean scores among the groups were tested for their significance.

Sources of Bias at C/D: Most sources of potential bias within C/D were rated as being a source of "little or no bias." Four items were rated as "border line" between "source of little bias" and "source of some bias." These items were: 1) Published information about programs, 2) Occupational literature, 3) Males in occupational courses, and 4) friends. These responses are summarized in figure 3. Even though all respondents rated C/D low as a source of sex bias, women in non-traditional programs differed significantly from men and other women on four items: 1) published information about programs, 2) occupational literature, 3) text books, and 4) friends.

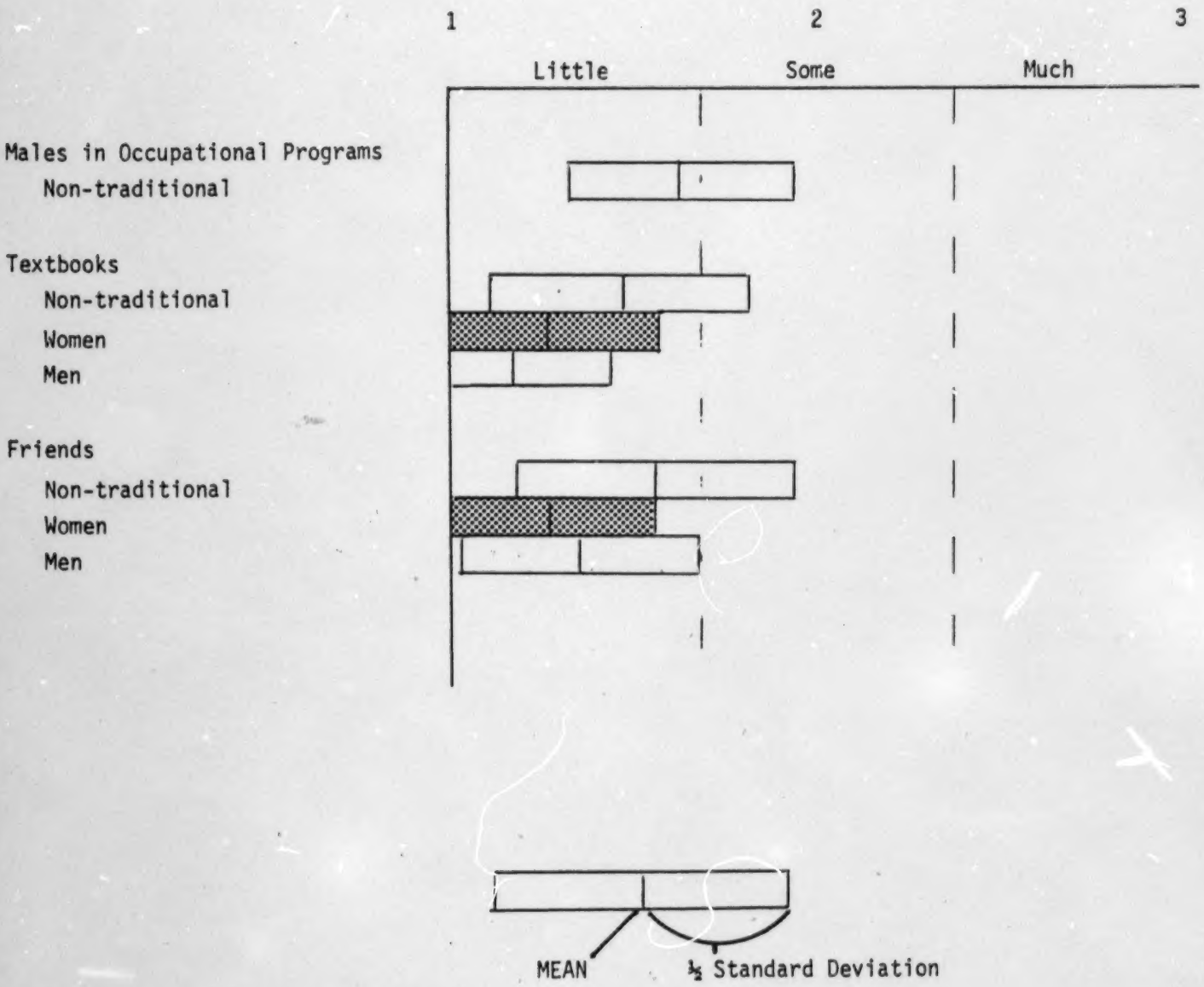
Sources of Bias Outside C/D: Of the fourteen potential sources of sex bias outside of C/D only three were identified as "sources of little or no bias." These three were: 1) Counselors at another college, 2) adult friends, and 3) other. Occupational literature was labeled as being a "source of some bias." The remaining items were "border line" between the two categories. An interesting response pattern developed for sources of bias outside C/D.

Figure 3

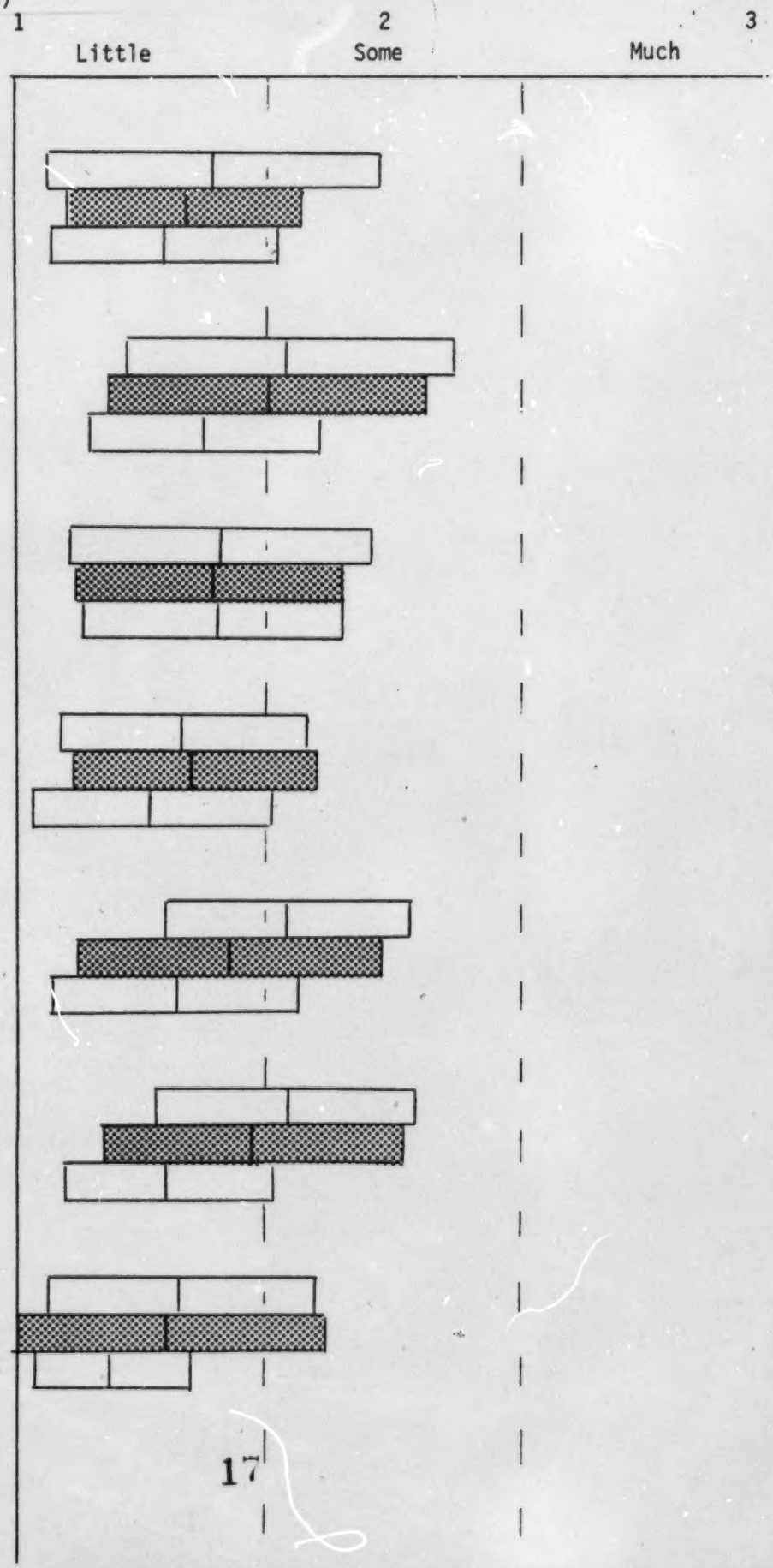
Sources of Bias at C/D

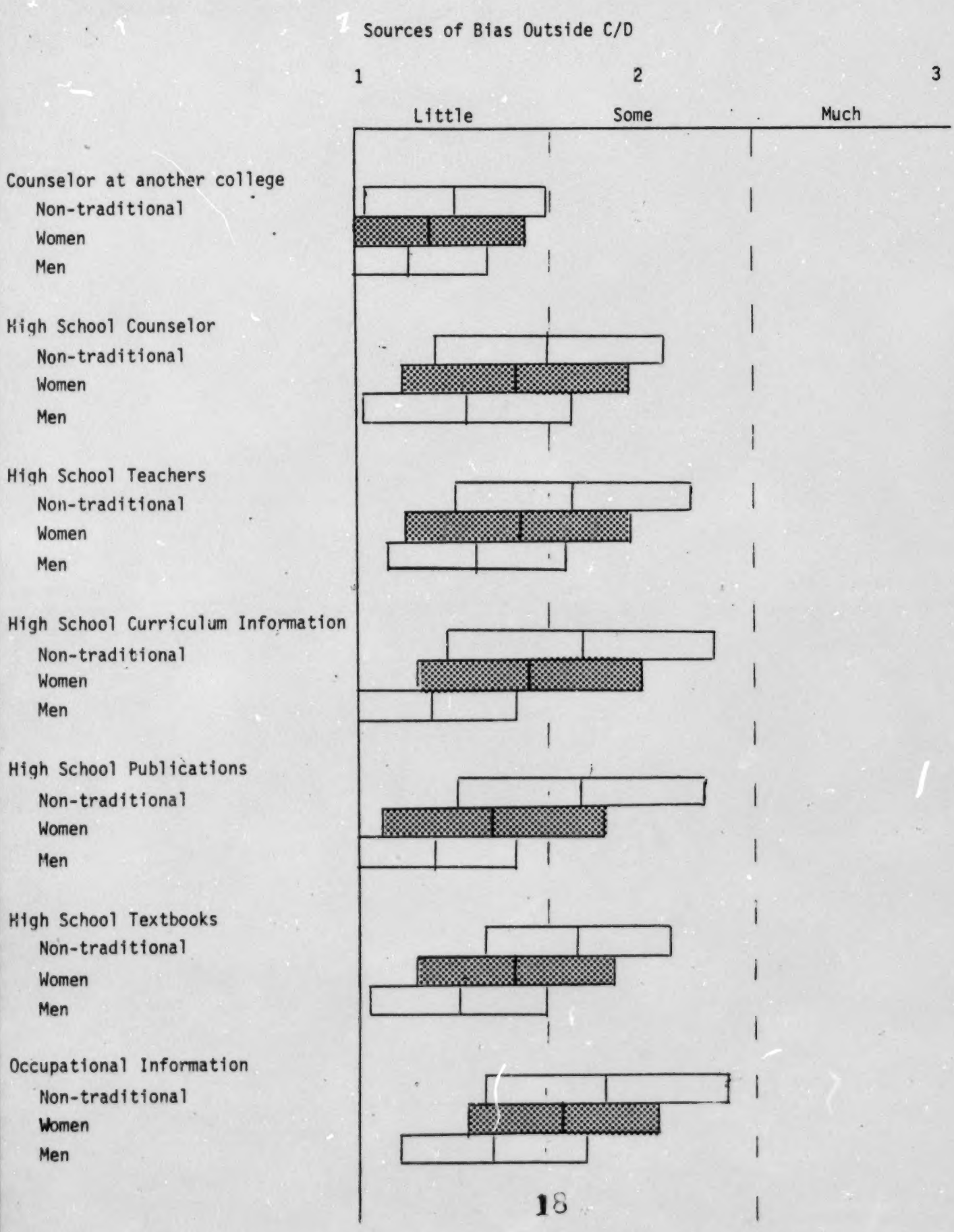


Sources of Bias at C/D (con't)



Sources of Bias Outside C/D (con't)




Sources of Bias Outside C/D
1
2
3
Little
Some
Much
Counselor at another college
Non-traditional
Women
Men
High School Counselor
Non-traditional
Women
Men
High School Teachers
Non-traditional
Women
Men
High School Curriculum Information
Non-traditional
Women
Men
High School Publications
Non-traditional
Women
Men
High School Textbooks
Non-traditional
Women
Men
Occupational Information
Non-traditional
Women
Men

Men consistently perceived the least amount of sex bias. They were followed by women in general with women in non-traditional programs consistently indicating the greatest amount of sex bias. For three of the items (high school teachers, high school publications, and high school text books), men women and non-traditional women differed significantly from each other. Men differed significantly from both groups of women on high school curriculum information, occupational information, text books, and other. Finally, women in non-traditional programs differed from men on their perceptions of high school counselors, elementary school teachers and movies. (Figure 3)

Special problems, concerns or advantages: Written comments were supplied by forty-one non-traditional women. Their comments ranged from being "one of the guys" to "last year I could have finished, but the remarks were so damaging I dropped out from pressure." A complete list of comments can be found in Appendix C.

Conclusions: Students at College of DuPage do not perceive the college as being a source of sex bias. Some problems with published information about courses may exist, and should be reviewed. Sources of potential sex bias outside of College of DuPage were rated as having more sex bias than internal sources.

Findings from Coordinator Interviews

The interview survey of occupational coordinators was intended to gain coordinators' perceptions of factors which might operate, intentionally, to discourage females from entering or continuing study in their own occupational program area. Additionally, the interview would provide a subjective measure of female sex bias among program coordinators.

No difficulty was experienced in arranging the interview in response to a letter requesting their cooperation in such a study. A standard interview outline was used to solicit the views of coordinators (see Appendix D). Responses were catagorized into broad categories and amplifying comments were recorded.

QUESTION #1: Is there a place for females in this occupational area? Fifty percent of the coordinators answered the question "Yes." The other half felt opportunities are limited. A typical response was: "Only in specific jobs because. . ." Usually, they were the same comment relating to physical ability. Additional comments are listed in Appendix D.

QUESTION #2: Can females perform satisfactorily in training?
Only one coordinator conveyed the impression that females were less adequate than males to perform the training. One said females are superior. One response was: "Females are better in some areas than males. Females tend to back away from hands-on training."

QUESTION #3: Do you see factors operating intentionally or unintentionally which discriminate against females?
Commercial literature on products and services is viewed as having some sex bias. This perception is shared by women in non-traditional occupational programs. Peer influence and employer preference also lean toward "some" female sex bias. Coordinators are aware that affirmative action compliance is resulting in an increasing demand for women by employers. A summary of coordinators views toward sources of sex bias appears in the table on the following page.

TABLE 7

DO YOU SEE FACTORS OPERATING, INTENTIONALLY OR UNINTENTIONALLY, WHICH DISCRIMINATE AGAINST FEMALES?

	NONE	SOME	MUCH	DON'T KNOW
Curricula Information	10	0	0	0
Course Descriptions	10	0	0	0
Career Information	4	5	1	0
Advising Process	8	1	1	0
Classroom Instruction	8	2	0	0
Peer Influences	7	3	0	0
Employer's Preferences	5	3	1	1
Other				

CONCLUSIONS

College of DuPage is a minor source of sex bias as perceived by students in general, women enrolled in traditionally male occupational programs and occupational coordinators of those programs.

Most women in non-traditional programs plan to continue their studies. Of which many will transfer to a four year college or university.

Sources outside the college, now or in the past, are viewed by students as being relatively greater sources of sex bias in their lives than sources in the college.

Students say that being male or female has had less influence on their choice of an occupational objective than their interests, abilities and employment opportunities -- less for women in non-traditional occupational programs and even less for men in general.

The largest source of sex bias, according to students, is published occupational literature, textbooks, and information about programs.

Women in non-traditional occupational programs tend to rate all sources as having stronger sex bias than women in general, who in turn perceive more sex bias than men in general. This is as anticipated in a male-white culture where the woman who pursues non-traditional objectives will be more acutely aware of prejudice.

The great majority of College of DuPage students (85%) do not believe that the education or training we offer at C/D would not be appropriate for them because of their sex.

Parents, childhood experiences, friends and relatives combined are easily the greatest source of influence on women's initial interest in pursuing a non-traditional career. College courses and occupational literature were also seen as important initial influences by about a quarter of women.

Instructors in occupational courses are seen as having little or no sex bias by women in their classes. An interview survey with these instructors (coordinators) supports this perception.

Occupational coordinators report that there are places in their occupational programs for women. And women can satisfactorily perform in training.

Coordinators identified published materials as being a source of potential sex bias.

APPENDIX A

FEMALES IN OCCUPATIONAL PROGRAMS

Enrolment Statistics, Fall Quarter 1977

	CERTIFICATE		OCCUPATIONAL		TRANSFER	
	Total Enrolled	Females	Total Enrolled	Females	Total Enrolled	Females
1. Air Conditioning & Refrig.	87	1	83	1	0	0
2. Architectural Drafting	23	5	48	9	1	0
3. Auto Service	75	2	80	0	0	0
4. Building Construction	14	0	39	0	0	0
5. Criminal Justice	39	7	85	11	111	25
6. Electronics	69	6	142	3	0	0
7. Fire Science	23	3	24	1	22	0
8. Graphic Arts	22	8	31	9	27	1
9. Manufacturing Tech.- Drafting	14	4	30	4	0	0
Materials	4	0	6	0	0	0
Evaluation	0	0	2	0	0	0
10. Plastics	11	3	11	1	0	0
11. Supermarket Management	7	2	6	3	4	0
TOTALS	388	41 10.5%	587	42 7.1%	165	26 15.7%
Some Programs Not Studied						
Ornamental Horticulture	17	11	31	18	25	14
Real Estate	32	16	58	23	0	0

WINTER 1978 REGISTRATION SURVEY

(C/D, IR-B-45, 781)

N = 236

College of DuPage has no regulations regarding what kinds of education or training females or males may pursue. We are aware, however, that there are more females in some programs and more males in others. Through this questionnaire, we would like to find out more about the influence of sex stereotyping on students' career choices.

(1)____ Sex 50% 1=Male 50% 2=Female

(2) 24.9 Age

(4)____ Enrolled 59% 1=Part time 41% 2=Full time

(5) 9.9 Total number of credit hours enrolled for the quarter.

What is your present occupational goal (nurse, electronics technician, architect, fashion design, etc.)? If you are somewhat undecided, list several occupations. If you are totally undecided, check box at left.

(7) [ ] _____

_____

How much has your choice of occupational objective been influenced strictly by your being male or female? In other words, has your sex had a great or greater influence on your occupational goal as such factors as your interest, abilites, and employment opportunities?

$\bar{x}$ S.D.

1.48 (10) .69 My being male or female has had:

1=Very little, or no, influence 2=A moderate amount of influence 3=A very large influence

64% 25% 11%

(11)____ Have you personally held the belief that some education or training preparations at College of DuPage would not be appropriate for you because of your sex?

17% 1=Yes 83% 2=No

Regardless of your present occupational goal, rate the following items according to the degree which each was (is) a source of sex bias in your life, using this scale:

3	2	1
Source of much bias	Source of some bias	Source of little or no bias

$\bar{x}$	S.D.	At College of DuPage	Percent 1 Little Bias	2 Some Bias	3 Much Bias
1.17	(12) .46	Counselor	86	11	3
1.15	(13) .42	Advisor	87	11	2
1.28	(14) .53	Instructors	76	20	4
1.20	(15) .45	Published information about programs	83	15	2
1.26	(16) .51	Occupational literature	77	20	3
1.37	(17) .59	Other students	69	26	6
1.23	(18) .53	Textbooks used on courses	82	13	5
1.32	(19) .58	Friends	74	21	6
		Outside College of DuPage (now or in the past)			
1.23	(20) .56	Counselor at another college	84	9	7
1.46	(21) .71	High school counselor	67	21	13
1.48	(22) .65	High school teachers	60	32	8
1.43	(23) .67	High school curriculum information	67	23	10
1.37	(24) .62	High school publications	70	22	7
1.42	(25) .65	High school textbooks	66	25	9
1.56	(26) .73	Occupational information	57	29	14
1.44	(27) .61	Friends	62	32	6
1.59	(28) .80	Elementary school teachers	61	19	20
1.54	(29) .73	Parents	60	25	14
1.42	(30) .64	Adult friends	67	25	8
1.52	(31) .73	Movies	62	24	14
1.52	(32) .71	Books (fiction and non-fiction)	61	26	13
1.32	(33) .62	Other	76	17	8

(OVER)

B-2

COLLEGE OF DuPAGE ◆ GLEN ELLYN ILLINOIS 60137 ◆ TELEPHONE 312-858-2800

APPENDIX C

November 10, 1977

Dear

I am contacting you because our records indicate you are a female and are studying at College of DuPage. The college is interested in the experience of females who have decided to enter traditionally male career fields. What we want to know, since any area of study at C/D is open to both sexes, is whether or not you encountered any difficulties in entering or pursuing your educational objective.

I would greatly appreciate your taking a few minutes to complete the enclosed questionnaire and return it in the enclosed stamped, self-addressed envelope. Your answers will be kept anonymous.

Jim Godshalk
Director of Counseling
and Advising

P.S. Please return your completed questionnaire by November 25th.

JWG:ec

N = 73

APPENDIX C

QUESTIONNAIRE FOR FEMALES
INTERESTED IN CERTAIN OCCUPATIONAL AREAS

College of DuPage has no regulations regarding what kinds of education or training females or males may pursue. We are aware, however, that there are few females in some areas of study. Through this questionnaire, we would like to find out more about the influence of sex stereotyping on students' career choices.

(1) Age 24

(2) Enrolled 63 Part time 37 Full time

(3) Total number of credit hours enrolled for the quarter 9.229

(4) Approximate total credits earned at C/D, including this quarter 38.934

(5) Approximate overall grade average at C/D 3.089
(4=A, 3=B, 2=C, 1=D)

(6) What is your present occupational goal (nurse, electronics technician, architect, fashion design, etc.)? If you are somewhat undecided, list several occupations. If you are totally undecided, check box ☐

_____

_____

(7) Approximate grade average in technical courses in this field 3.288

(8) How did you first become interested in this type of training or occupation? (check all that apply)

26 Childhood experiences
25 Parent(s)
36 Friends or Relatives
16 High School Courses
25 College Courses
3 High School Counselor
1 C/D Counselor
6 C/D Advisor
23 Occupational Literature
18 Reading (not occupational literature)
10 Movies
19 Part-time Job Experience
10 Interest Tests
33 Other_____

(9) What are your educational plans?
(check all that apply)

49 Continue study in this occupational area
30 Earn an AAS degree in a C/D occupational program
16 Earn a certificate in a C/D occupational program
22 Earn an AA, AS or AGS degree
5 Not interested in a degree or certificate from C/D
36 Transfer to a 4 year college or university
34 Enter employment after leaving C/D

(10) How much has your choice of occupational objective been influenced strictly by your being female? In other words, has your sex had a greater influence on your occupational goal than factors such as your interests, abilities, and employment opportunities?

My being female has had , relatively:
(check one)

74 Very little, or no, influence
25 A moderate amount of influence
1 A very large influence

$\bar{x}$ = 1.274
S.D = 0.479

C-2

(over)

(11) Have you personally held the belief that some education or training preparations at College of DuPage would not be appropriate for you because of your sex?

15 Yes 85 No

(12) Regardless of your present occupational goal, rate the following items according to the degree which each was (is) a source of sex bias in your life, using this scale:

3	2	1
Source of much bias	Source of some bias	Source of little or no bias

$\bar{x}$	S.D.	At College of DuPage	1	2	3
1.09	.35	___ Counselor	93	6	2
1.11	.37	___ Advisor	90	8	2
1.21	.51	___ Instructors in occupational courses	81	11	5
1.24	.47	___ Instructors in other courses	78	21	2
1.53	.72	___ Published information about programs	61	26	13
1.63	.73	___ Occupational literature	52	34	14
1.45	.59	___ Other students	60	36	5
1.62	.65	___ Male students in occupational courses	48	43	9
1.48	.64	___ Textbooks used in courses	59	33	8
1.56	.71	___ Friends or relatives	57	30	13
		Outside College of DuPage (now or in the past)			
1.32	.62	___ Counselor at another college	76	16	8
1.65	.84	___ High school counselor	59	18	24
1.72	.80	___ High school teachers	50	28	22
1.77	.86	___ High school curriculum information	50	23	27
1.76	.84	___ High school publications	50	24	26
1.74	.80	___ High school textbooks	48	31	22
1.82	.79	___ Occupational information	41	35	24
1.54	.60	___ Friends	57	32	11
1.73	.89	___ Elementary school teachers	57	14	29
1.58	.77	___ Parents	59	23	17
1.47	.64	___ Adult friends	61	31	8
1.71	.72	___ Movies	45	40	15
1.72	.74	___ Books (fiction and non-fiction)	45	38	17
1.45	.69	___ Other	66	24	10

(13) Have you experienced any special problems, concerns or advantages because of your being a female student in this occupational area of study?

SEE ATTACHED LIST #1

PLEASE RETURN BY NOVEMBER 25th. THANK YOU FOR YOUR COOPERATION!

ATTACHED LIST #1

Question 13: Have you experienced any special problems, concerns or advantages because of your being a female in this occupational area of study?

Many embarrassing and cutting remarks by instructors which were chauvenistic. Last year I could have finished, but the remarks were so damaging I dropped out from pressure. This year I decided just to finish no matter what-keep my 4.00 grade point average, but do not enjoy the teachers who teach at all. I just want to finish and get out! I also feel the money I lost last year by stopping the class was a big rip off. I have to take the classes over again. That's a loss to me of $115.00. Teachers are in A.M. classes. I know I'm not the only female who felt this way last year or this year. We kind of stick it out together, but I know of some girls who wouldn't finish. Thanks for finally checking this out!

No, but I do feel "out of place."

Not at the present time.

In some fields I've worked (grocery store, gas station) I've found I had to work harder than my male counterparts to get the proper recognition.

No in C/D, but in talking to patrolmen I found that they really don't want women on the police force.

Not really any problems, but every course I have enrolled in other than C/D and also every job I've held in this related area the people always seem to think a girl could not handle the job. I've had to prove myself and show them I can work as well in this field as a male.

No problems and no advantages because of my being a female.

No, I haven't experienced any special problems, whether negative or positive because of being a female. I don't generally look at things in perspective to whether they are bias or unbias toward females. I look into the entire scope of affairs that concern all individuals.

Problems involve being treated as "a woman" in a male dominated field. Being given easier tasks which in some cases is almost welcome. But, when it comes to being treated as if you will never learn anything becuase you're female, I get downright hostile.

In one class I had a hard time getting the males to talk to me because of their uncertainty as to how serious I was about the course.

No, in fact it's really hard to answer these questions because I really didn't realize this field was predominantly male. I only chose it because I have taken art classes and would like to relate it to a commercial type program. I took the intro. to graphics and liked it so I will try to go on. At this point I didn't pay any attention to advantages or disadvantages of being a female.

No, I just feel a little out of place. But I like what I am doing. I may not be great, but satisfactory.

No sir. I have actually been to an advantage because of my sex. In my present line of work a woman can get into more places without being obvious than a man can. I enjoy my work to an extreme. It's an obsession! I hope that I never run into problems because of my sex. I'm also very satisfied with C/D courses and am impressed by your interest in me as an individual.

Yes, getting a job as a firefighter in Illinois is a hard thing to do for a woman. The physical agility test is for a male to take without the female in mind.

In class, I feel I can get just as good as grade as a male person. I have little concern that I am a female in a male occupational field. I do, however, worry sometimes if I will get hired by an agency to be a police officer, and how long it will take for them to hire me if they do.

The main problem is the unconcious sexism in the language used. It is not deliberate and most people are surprised when it is pointed out to them. Some get angry, but most try to correct it. The Graphics Arts instructors have done a great job of adjusting to having more women in their classes, which previously were almost totally made up of males.

I have never experienced any special problems because I'm female. Most of the time I've been the only female in my class and I get treated just like everyone else.

No problems experienced, instead have found the instructor interested in my goal and is most helpful in giving information to me.

The males in my technical class consider me to be "one of the guys" - they've even changed my name to "Fred". Some negative attitudes, but nothing major.

At first the guys in my classes wouldn't talk to me except to make smart remarks. But the tension has eased and now I can talk freely with them. I even find they rely on my to have good notes if they miss a class.

No special problems. Advantages: better pay than traditional female occupied jobs.

No problems yet from C/D. But alot from partners.

Our company does hire female draftsman, etc. I do have advantages in my field with school training, inside the company training (on the job), and special training program for beginners. By taking the courses here at C/D it is helping me more and I have a better advantage of getting the job much easier with more background (experience) in this field.

Only in that the instructor seems to be working on the assumption that I would not be interested in certain areas of the field (i.e. presswork, dirty messy, "mechanical") whereas I feel I need to learn everything possible about the field to make myself more valuable as an employee. I feel that he (instructor) is assuming that I want to get a traditionally female job (typesetting, etc.) which are also the lower paying jobs. My goal is to get the highest paying job possible within my area of interest (which I have not zeroed in on yet). A large part of my reason for going into graphic arts was because it is a traditionally male field and the pay tends to be higher - plus it fits into my interest in the commercial art field.

Another problem I have encountered at C/D to a much greater extent is more related to age than sex discrimination. I feel that most of the instructors and the few advisors that I have been in contact with are totally oriented towards 18 year old kids who's parents are paying the bills and supporting them, and who have all the time in the world to take whatever courses that might fit in to their course of study. I find instructors continually suggesting (strongly) "side" courses to take. It is difficult for me to pin them down to what courses I really need for my occupational goals and/or degree - without wasting time/money on unnecessary courses. I mention this in behalf of the many women I have encountered in my classes who have outside responsibilities and for whatever reasons (can't afford to take alot of classes, can't take alot of time away from their families, or, like me, need to finish school and get a job). They can't fool around with unnecessary classes, and find this to be a problem to them, too.

Areas of graphics you are limited because equipment is just too heavy.

I completed the Graphic Arts program several years ago and am now in the commercial art program at C/D. My graphic arts instructors were super and really encouraged me and helped my. I got my present job through Ken Murphy, one of my instructors. Discrimination is still prevalent in the field, however. My employer told me the last time I asked for a raise, "You're probably the highest paid woman in Naperville, and should be happy with that."

No, I found the students of all ages and both sex to be very friendly. I don't believe either my sex or age have set me apart from the other students--we all get along very well and I enjoy being a part of it all. My drafting teacher in Arch. Tech. (David Claus) is, in my opinion, the greatest, most helpful person and treats all his students equally. I don't believe Mr. Claus, the other students in the class, or any of the students in the entire school ever would show me any less or more attention because of my sex or age. I feel very comfortable at C/D and have made lots of friends here. No problems at all at C/D.

1. There are many advantages because the police forces can't discriminate against women.
2. Many of the men at first didn't like me being on the police force, however, they have accepted my being there.
3. In school, the women were more or less given a break. Such as when it came to answering question. The men were asked more frequently.

I haven't taken enough courses.

None at all.

I feel getting a job will be more easier for me because everything is going equal opportunity. I haven't experienced any problems.

None yet.

In my class there were almost as many females as males. This is my first quarter in an intro. class, next quarter maybe different because many are not going on. I have been very happy with this course and plan to go on.

Not so much as being a female but minority group.

Have felt uncomfortable being the only female in a class - 3/4 times its happened.

This questionnaire is a special concern being that it is more bias than anything I've ever heard of. Entering the program or before thinking about it. By this day and age, women are in everything almost so being in the program is not unusual nor should it have any reason to be questioned.

At work (land surveying) it is rough in the sense of putting up with the weather. My boss will send a guy out in the field (untrained) rather than me. Most of the time it's pretty unfair. I do drafting work inside.

Probably find more encouragement in the Special Ad field because of the demand in general and find a recent demand for <u>women</u> in Criminal Justice.

Most employers were able to give me a fair chance and were glad to have a female try. Only some males were concerned about my lifting heavy weights but most have gotten used to it. The only advantage (?) to being female might be that she will be hired because women can still be expected to work for less.

Because I am only new to this study I encounter more difficulty from lack of knowledge than from being female, and so far the only difficulty is because though I want architictural drafting I realize it is tough for me but also for men now to get jobs.

My experiences at C/D, one very positive, supportive, and constructive. However, some of the adjustments in my personal have been difficult and sometimes painful. I feel that my age as well as my sex is a strong factor in considering my experience.

Date_____

APPENDIX D

COORDINATOR INTERVIEW RECORD

Women in Traditionally Male Occupational Programs

Name_____ Program_____

Enrolment Statistics:	Certificate	Occupational	Transfer
Number of Females	___	___	___
Total	___	___	___

I. Purpose of study (refer to 11/7 memo), confidentiality of their responses.

II. Questions

1. Is there a place for females in this occupational area?

2. Can females perform satisfactorily in training?

3. Do you see factors operating intentionally or unintentionally which discriminate against females?

   a. Curriculum information
   b. Course descriptions
   c. Career information
   d. Advising process
   e. Classroom instruction
   f. Peer influences
   g. Employer preferences
   h. Other

III. Closure - Thanks. Availability of results.

APPENDIX D

TO: Don Carlson, Air Conditioning & Refrig.
Paul Fina, Plastics
Bill Fitzgerald, Criminal Justice
John Gannon, Auto Service
Ed Giermak, Supermarket Management
Walter Grimes, Architectural Drafting
" " , Building Construction
Wm. R. Johnson, Manufacturing Tech.
Oleh Kuritza, Electronics
Ken Murphy, Graphic Arts
John Senffner, Fire Science

DATE: November 7, 1977

FROM: Jim Godshalk

SUBJECT: FEMALES IN TRADITIONALLY MALE OCCUPATIONAL AREAS

Do we discourage females from pursuing traditionally male occupational preparations? This is a question raised by a board member. Ted Tilton has assigned me the task of answering the question.

I am surveying a sample of all students through a registration survey to discover how aware students are of any factors at C/D or elsewhere which have exerted a sexist influence on their career plans. I am also surveying female students who, by their curriculum code, indicate they are studying in a traditionally male occupational program area. I want to know to what extent they have felt encouraged or discouraged in pursuing their field of study.

The third source of information I'd like is the perceptions of occupational program coordinators in traditionally male career areas. If you are willing to cooperate, I'd like to know if you think there are any factors which operate intentionally or unintentionally to discourage females from entering or continuing study in your occupational program area. What are those factors, if any, and where do they operate? C/D curriculum information? Course descriptions? Career information? Advising process? Classroom instruction? Peer influences? Employer preferences? Etc.

Your thoughts are desired by November 30th. My preference is to come visit you. I will contact you November 16th or 17th to see when we might meet.

ec
cc: Ted Tilton

APPENDIX D

RESULTS OF THE INTERVIEW SURVEY

Question #1

IS THERE A PLACE FOR FEMALES IN THIS OCCUPATIONAL AREA?

High Demand	Yes	Limited	Not Sure	None
1	4	5		

Coordinators' Comments:

"Only in specific jobs . . .

..Few in others because of strength, climbing, dirt, cold, heavy tools."

..Because of rough physical training."

..Few in others because the consumer prefers males. There are growing opportunities in reception jobs."

..This is one of the most sexist jobs, peer acceptance is difficult. The person must be strong and have stamina. Women may be physically qualified."

..In the areas we teach at C/D."

"Large employers are seeking women."

"Industry says "Yes" but in practice it's a man's world."

"Sex is not a factor in industry - women are preferred for some jobs."

"My best placement was female in a high management position."

"I can place women in non-physical jobs."

Question #2

CAN FEMALES PERFORM SATISFACTORILY IN TRAINING?

Better Than Males	Same As Males	Poorer Than Males
1	8	1

Coordinators' Comments:

"Females are better in some areas than males. Females tend to back away from hands-on training."

"Females have some problem in eye-hand coordination, but they can overcome this."

"Usually females are better students, but of course this is only classroom instruction."

"Women are better at fine work."

"Women have survived the training."

"My best student is a woman.. So is my worst."

Question #3

DO YOU SEE FACTORS OPERATING INTENTIONALLY OR UNINTENTIONALLY WHICH DISCRIMINATE AGAINST FEMALES?

Coordinators' Comments:

Curricula Information

"Physical condition is stressed."

Career Information (In reference to commercial literature about products/services)

"Physical qualifications imply it's a male job."

"Hazards are told."

"To show experience or expertise, they show males--to attract males to purchase products, they show females."

Advising Process

"I ask females why they want to be in the program."

"We must point out problems a woman will encounter."

"I state there is prejudice, hazard and peer hazing."

"I tell them of increasing opportunities as a result of affirmative action."

"I warn them they are apt to be discriminated against."

"I identify the specific entry areas for women."

Classroom Instruction

"They're concerned about their hands. They wear gloves."

"Girls are more aggressive achievers. They pull the group along and set high standards."

Peer Influence

"Male students enjoy their campanionship."

"They mix easily."

"Males tend to want to operate any machinery."

"Males treat females too good--they spoil them."

"Males try to draw females into the group. They intimidate females as much as they do other males."

Employer Preferences

"Employers would be embarrassed to hire a woman."

"They publicize in a non-discriminating manner, but the employers are sexist."

"Women have very limited upward mobility."

"There is nothing that operates regularly or open."

"Most employers say it doesn't matter."

"They may want a woman so they can pay her less."

"No apparent discrimination, but there is inequality in pay."

"Employers refer their women workers to take theory courses."

"I couldn't say what happens once an applicant gets into the employer's selection process."

"Females may get higher pay offers."

" I get specific requests for females."

Other

"Women enter only to take the theory courses in the program."

"Women don't seem themsleves in this field. We must dispell the myths they have."

"The women I have are not in it for a job, but for their own personal edification."

APPENDIX E

Sources of Bias at C/D

Counselor	Non-traditional	Women	Men
$\bar{x}$	1.09	1.21	1.14
S.D.	.35	.50	.41
N	73	92	92
Advisor			
$\bar{x}$	1.11	1.20	1.11
S.D.	.37	.48	.35
N	73	91	92
Instructors			
$\bar{x}$	1.24	1.32	1.23
S.D.	.47	.57	.50
N	73	99	94
Published Information about programs			
$\bar{x}$	1.53	1.22	1.17
S.D.	.72	.46	.43
N	73	97	92
Occupational Literature			
$\bar{x}$	1.63	1.25	1.27
S.D.	.73	.50	.52
N	73	96	92
Other Students			
$\bar{x}$	1.45	1.37	1.37
S.D.	.59	.60	.59
N	73	97	91
Textbook Used on Courses			
$\bar{x}$	1.48	1.28	1.19
S.D.	.64	.59	.47
N	73	98	94
Friends			
$\bar{x}$	1.56	1.29	1.36
S.D.	.71	.52	.64
N	73	96	93

Sources of Bias Outside of C/D

Counselor at another college			
$\bar{x}$	1.32	1.27	1.19
S.D.	.62	.64	.47
N	73	86	89
High school counselor			
$\bar{x}$	1.65	1.53	1.39
S.D.	.84	.76	.66
N	73	94	95
High school teachers			
$\bar{x}$	1.72	1.56	1.40
S.D.	.80	.71	.57
N	73	96	94
High school curriculum information			
$\bar{x}$	1.77	1.59	1.27
S.D.	.86	.74	.55
N	73	95	94
High school publications			
$\bar{x}$	1.76	1.47	1.27
S.D.	.84	.70	.51
N	73	95	93
High school textbooks			
$\bar{x}$	1.74	1.52	1.32
S.D.	.80	.70	.57
N	73	94	93
Occupational information			
$\bar{x}$	1.82	1.69	1.44
S.D.	.79	.78	.65
N	73	94	94
Friends			
$\bar{x}$	1.54	1.48	1.40
S.D.	.69	.61	.61
N	73	96	94

Elementary school teachers			
$\bar{x}$	1.73	1.67	1.50
S.D.	.89	.86	.74
N	73	94	94
Parents			
$\bar{x}$	1.58	1.53	1.54
S.D.	.77	.72	.74
N	73	97	94
Adult Friends			
$\bar{x}$	1.47	1.46	1.37
S.D.	.64	.68	.60
N	73	95	94
Movies			
$\bar{x}$	1.71	1.60	1.43
S.D.	.72	.78	.67
N	73	94	93
Book (fiction and non-fiction)			
$\bar{x}$	1.72	1.63	1.40
S.D.	.74	.77	.63
N	73	95	93
Other			
$\bar{x}$	1.45	1.44	1.24
S.D.	.69	.76	.47
N	73	50	76

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LOS ANGELES
MAR 9 1979
CLEARINGHOUSE FOR
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